

# CONTROL DATA® 791-1 COMMUNICATIONS SUBSYSTEM CONTROLLER

**CONTROL DATA**  
CORPORATION



The Control Data 791-1 Communications Subsystem Controller is an internally programmed device which connects multiple communication lines of different types and speeds to CDC® CYBER 70™, or CDC 6000 Computer Systems. The device performs most of the control functions necessary for servicing up to forty-eight full- or half-duplex communication lines and transmits data to the computer in a standard format ready for processing. By performing these functions the 791-1 frees the central processing unit and central memory for more productive processing.

As shown in the configuration, a CDC 7077-1 Communications Station or CDC 7611-10 Service Station is necessary to interface the 791-1 to either a CDC CYBER 70 Computer or to a CDC 6000 Computer.

The basic 791-1 has 4,096 16-bit words of core memory with a cycle time of 200 nanoseconds; this can be increased to a maximum of 8,192 words with the addition of a CDC 10274-1 Memory Module. To insure communication accuracy, the 791-1 has a cyclic encoder unit incorporated into the hardware.

The 791-1 can service up to sixteen full duplex communication lines through the 791 Communication Adapters which are mounted inside the 791-1 cabinet. Line speeds may vary from 75 to 50,000 bps and the transmission mode may be half- or full-duplex.

The device also contains all control logic necessary for expansion up to a maximum of forty-eight lines, a total which is dependent on the type and speed of the lines. When the lines are of identical speed and type, the 791-1 can service up to four 50,000 bps lines; up to ten lines at 19,200 bps; up to sixteen lines at 9,600 bps; up to thirty-two lines at 4,800 bps; or up to forty-eight lines at 2,400 bps or less. Any combination of line speeds can be used provided the total throughput (input and output) does not exceed 400,000 bps.

The full complement of communications lines is attained by adding 791-2, -3, -4 and -5 Communications Modules and the associated 792 Communication Adapters. Each of the Communications Modules with Adapters increments the total number of lines by eight. This modular design allows users to increase the number and variety of terminals in small, economic increments.

#### **SOFTWARE SUPPORT**

Software support for the 791-1 Communications Subsystem Controller consists of resident programs within the 791-1 together with the operating system software for the CDC CYBER 70 or 6000 Computer Systems.

#### 791-1 Resident Software

The Communications Subsystem Controller Version 1.0 software provides for two modes of operation, modes 2 and 3. Mode 2 consists of two-way simultaneous transmission on a point-to-point dedicated communication channel. Mode 3 consists of interactive two-way alternate on a point-to-point switched or non-switched communication channel. Subsequent versions will support Mode 1, which consists of two-way alternate on a multi-point, or point-to-point non-switched or point-to-point switched communication channel with CDC interactive or batch terminals.

#### CYBER 70/6000 Software

Operating System Support includes SCOPE, Version 3.4.1 and 6000 INTERCOM, Version 4.1 with remote batch.

#### CYBER 70/Model 76 Software

Operating System Support includes SCOPE, Version 2.X and Export/Import batch terminals, Version 1.0 for the CDC CYBER 70/Model 76.

#### ASSOCIATED EQUIPMENT:

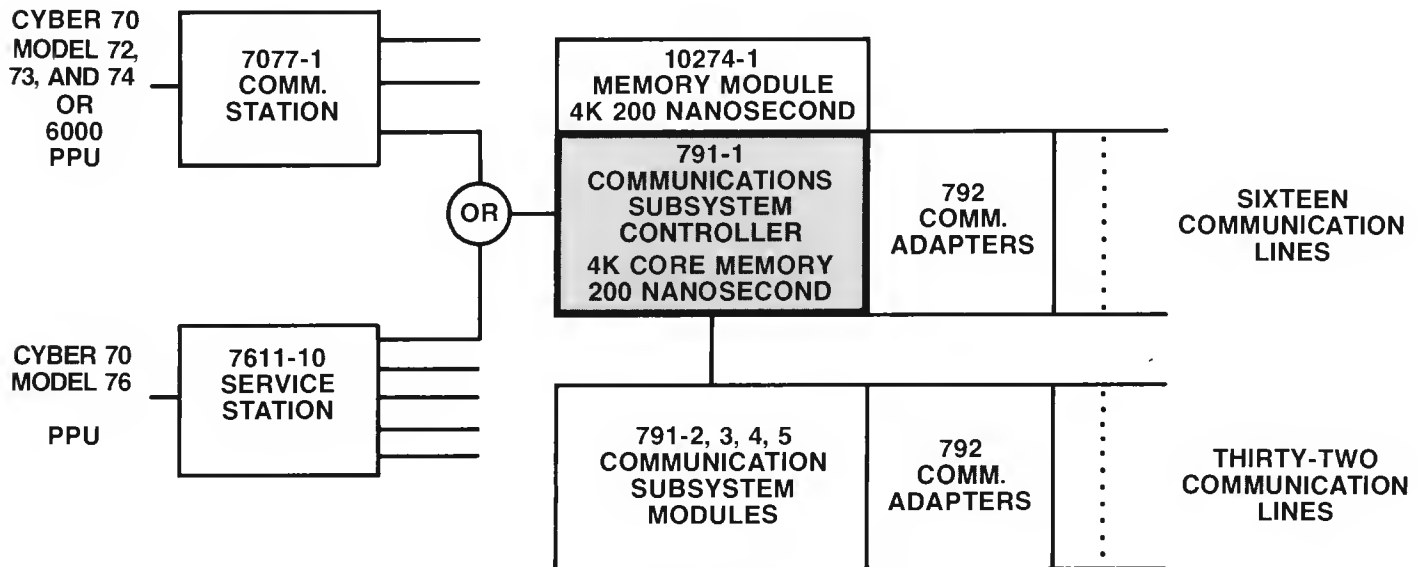
- CDC 7611-10 Service Station
- CDC 7077-1 Communications Station
- CDC 791-2, 3, 4, 5 Communications Subsystem Modules
- CDC 792-1, 2, 3, 10 Communications Adapters
- CDC 10274-1 Memory Module

#### PHYSICAL DESCRIPTION:

Height 52"  
Width 32"  
Depth 72"  
Weight 1200 lbs.

#### POWER REQUIREMENTS:

120/208 400 Hz 3-phase 8.7 amps per phase  
120/60 Hz single phase 4.5 amps



#### SUBSYSTEM CAPABILITY

4-50,000 BPS COMM. LINES  
OR 10-19,200 BPS COMM. LINES  
OR 16-9,600 BPS COMM. LINES  
OR 32-4,800 BPS COMM. LINES  
OR 48-2,400 BPS COMM. LINES  
OR COMBINATION OF THE ABOVE NOT  
TO EXCEED A TOTAL THROUGHPUT  
(INPUT / OUTPUT) OF 400,000 BPS.